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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/918,353	07/30/2001	Kamel Ayadi	12885-003001	5775

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EXAMINER

NGUYEN, KHIEM M

ART UNIT PAPER NUMBER

2839

DATE MAILED: 06/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/918353

Applicant(s)

AYADI

Examiner

K. NGUYEN

Group Art Unit

2839

— The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address —

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- ☐ Responsive to communication(s) filed on _____
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-37 is/are pending in the application.
- ☐ Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-8, 11-20, 23-31, 34-37 is/are rejected.
- ☒ Claim(s) 9-10, 21-22, 32-33 is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement

Application Papers

- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).
- ☐ All ☐ Some* ☐ None of the:
 - ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____
 - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a))

*Certified copies not received: _____

Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
- ☒ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other _____

Office Action Summary

Art Unit:

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-8, 11-20, 23-31, 34-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted Prior Art in view of Chun et al. (5,521,992) and Fujimura et al. (6,576, 888).

The APA integrated circuit (IC) design disclosed in the background of the present invention lacks the claimed multi-sided module having a cavity housing a substrate provided with n photoreceivers located on a side of the substrate adapted to receive a beam of collimated light.

Chun discloses module like substrate 400 with cavity for receiving and housing a substrate 408 provided with n photoreceivers (non-numbered) located on optical surface 409 (see also figure 5 embodiment).

Fujimura also discloses a multi-sided optical module 2 having a cavity housing a substrate 20 provided with n photodetectors or receivers 22 located on a side of the substrate and an IC 28 positioned on the substrate to process the output of the photoreceivers.

Art Unit:

Therefore, it would have obvious for one of ordinary skilled in the art at the time of the present invention to provide a multi-sided module with a cavity for housing a substrate with IC provided with n photoreceivers located on a side of the substrate of the APA in view of the teachings of Chun and Fujumura. The molding of optical components in the IC substrate would result in a more precise and compact system as disclosed by Chun et al.

Regarding the different beams of collimated light as laser packet, pulses or network light is deemed a matter of routine experimentation, optimum ranges and use of preferred product (In re Aller, 105 USPQ 233. CCPA 1955).

Therefore, it would have been obvious for one of ordinary skill in the art to use the different types of collimated light beams (laser packet, pulses or network) for the prior art optical system for acheiving the required design constraints.

Regarding the use of n transistors for converting the n laser light pulses to n electronic pulses, n receivers for converting the n electronic pulses to a digitized packet and the use of n latches for storing said digitized packet are old and well known in the art. Fujimura discloses IC 28 which processes the optical signal to electrical signal. An example in the use of electronic latches for storing a digital data from processed optical signal is disclosed in Smith et al.


Art Unit:

Allowable Subject Matter

3. Claims 9-10, 21-22, 32, 33 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

4. The following is a statement of reasons for the indication of allowable subject matter: The use of a laser controller in combination with the claimed optical module of the instant invention for receiving a series of k electronic pulses from the multiplexer; and a laser light source receiving an input from the laser controller and sending a second laser light packet having a second set of k light pulses to the network, wherein $k = n$ is not being disclosed in the prior art.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Khiem Nguyen whose telephone number is (703) 308-1738.


KHIEM NGUYEN
PRIMARY EXAMINER

K.N.

June 16, 2003